

Docket No. 741.819-000715

Serial No. 10/018,369

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IN THE CLAIMS:

Please cancel claim 9 and amend claims 8, 10, and 11 as follows:

1-7 (Cancelled)

8. (Currently amended) A method for manufacturing an optical fiber preform using a rod-in-tube method, ~~wherein a first glass rod for a core or a second glass rod for the core and a cladding is inserted into a glass pipe for the cladding, the method for manufacturing an optical fiber preform comprising the steps of:~~

- a) inserting a glass rod into a glass pipe and setting a pressure reduction level ~~reducing pressure in the glass pipe,~~
- b) ~~successively heating the glass pipe and the first glass rod or the second glass rod in a longitudinal direction while reducing the pressure in the glass pipe, and~~
- c) ~~causing the glass pipe to collapse successively in the longitudinal direction due to the heating, and elongating the unified glass pipe and glass rod in the longitudinal direction until the outer diameter of the glass pipe becomes a predetermined diameter. [;]]~~
- d) ~~after the step c), successively elongating the preform, in which the glass pipe and the first glass rod or the second glass rod are unified, in the longitudinal direction until the outer diameter thereof becomes a predetermined diameter,~~

~~wherein in the step c), after the glass pipe and/or the first glass rod or the second glass rod is/are formed into a tapered shape, the glass pipe is caused to collapse on the first glass rod or the second glass rod a position at which the glass pipe and/or the glass rod are/is elongated is longitudinally upstream from a position at which the glass pipe is caused to collapsed on the glass rod, and~~

in the step c), the pressure reduction level is set so as to satisfy the following equation:

$$0.1 < L1/(L1+L2) < 0.8,$$

where L1 is length from the position at which the glass pipe and/or the glass rod are/is elongated to the position at which the glass pipe is caused to collapse on the glass rod, and L2 is the length from the position at which the glass pipe is caused to collapse on the glass rod to a position at which the outer diameter of the glass pipe becomes a predetermined diameter.

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9. (Cancelled)

10. (Currently amended) The method for manufacturing an optical fiber preform according to claim 8 or 9, wherein the step c) ~~is and the step d)~~ are performed so as to satisfy the following equation:

$$1 < (d0/D0)/(d1/D1) < 2,$$

where D0 is the outer diameter of the glass pipe, d0 is the inner diameter of the glass pipe, D1 is the outer diameter of the glass pipe at the position at which the glass pipe is caused to collapse on the first glass rod or the second glass rod, and d1 is the inner diameter of the glass pipe at the position at which the glass pipe is caused to collapse on the first glass rod or the second glass rod.

11. (Currently amended) A method for manufacturing an optical fiber preform using a rod-in-tube method, ~~wherein a first glass rod for a core or a second glass rod for the core and a cladding is inserted into a glass pipe for the cladding~~, the method for manufacturing an optical fiber preform comprising the steps of:

a) inserting a glass rod into a glass pipe and adjusting a pressure reduction level ~~reducing pressure in the glass pipe;~~

b) ~~successively~~ feeding the glass pipe and the first glass rod or the second glass rod in a longitudinal direction into a heating furnace ~~while reducing the pressure in the glass pipe;~~ and

c) causing the glass pipe to collapse ~~successively~~ in the longitudinal direction due to successively heating of the glass pipe and the first glass rod or the second glass rod in the longitudinal direction in the step b), and elongating the unified glass pipe and glass rod in the longitudinal direction until the outer diameter of the glass pipe becomes a predetermined diameter; ~~and~~

d) ~~after the step c), successively elongating the preform, in which the glass pipe and the first glass rod or the second glass rod are unified, in the longitudinal direction until the outer diameter thereof becomes a predetermined diameter;~~

wherein a cross section area of the first glass rod or the second glass rod is smaller

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than a cross section area required for the glass pipe, and

the step of feeding is performed so as to satisfy the following equation:

$$1 < V_R / V_P < 2,$$

where V_R is a feed rate of the first glass rod or the second glass rod, and V_P is a feed rate of the glass pipe.

12. (Previously Presented) The method for manufacturing an optical fiber preform according to claim 11, wherein in the step b), the feed rate of the first glass rod or the second glass rod is adjusted such that a core/cladding ratio of the preform becomes a predetermined value.

13. (Previously Presented) The method for manufacturing an optical fiber preform according to claim 11 or 12, wherein in the step b), the feed rate of the first glass rod or the second glass rod is adjusted such that a value of the core/cladding ratio of the preform changes in the longitudinal direction as desired.

14. (Previously Presented) The method for manufacturing an optical fiber preform according to claim 11 or 12, wherein the step c) is performed while the glass pipe and/or the first glass rod or the second glass rod is/are rotated around the axis thereof.

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